W. H. TAYLOR.
Lock.

No. 212,636. Patented Feb. 25, 1879.

Fig 1.

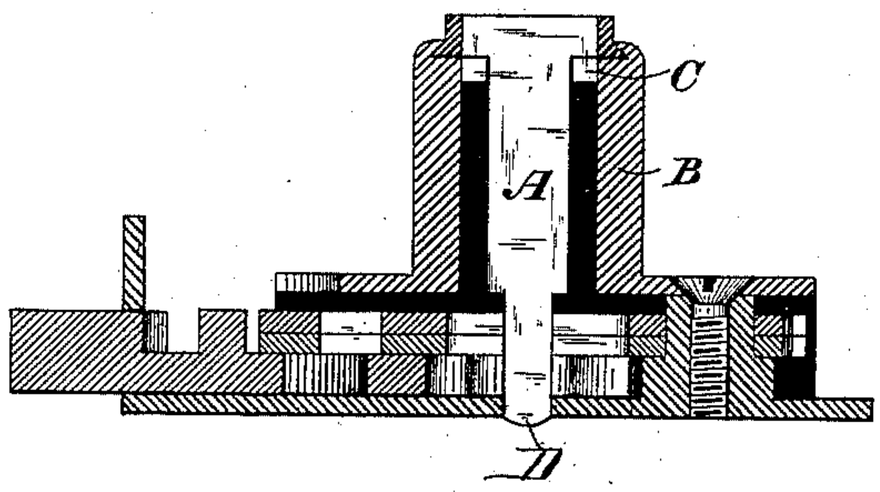


Fig 2.

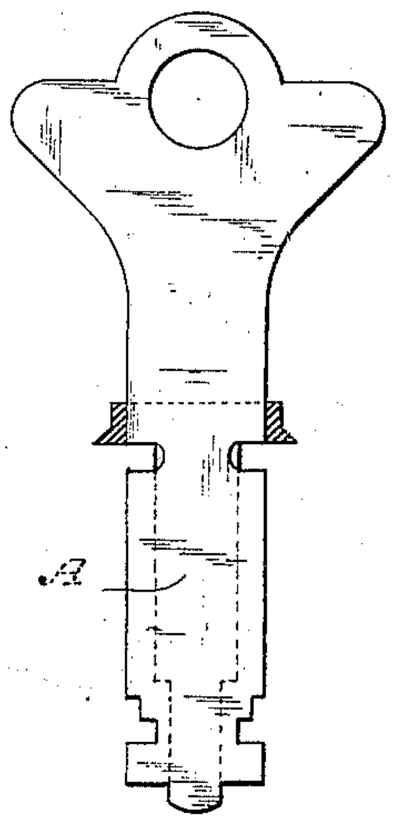


Fig 3.

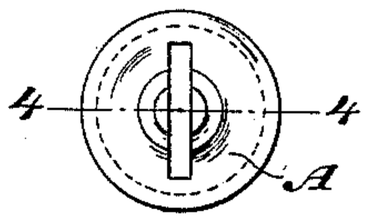


Fig 4.

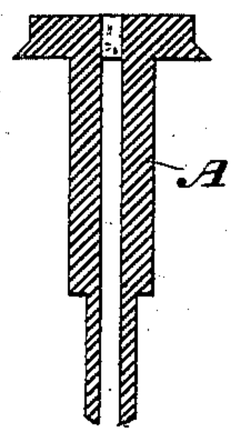


Fig 5.

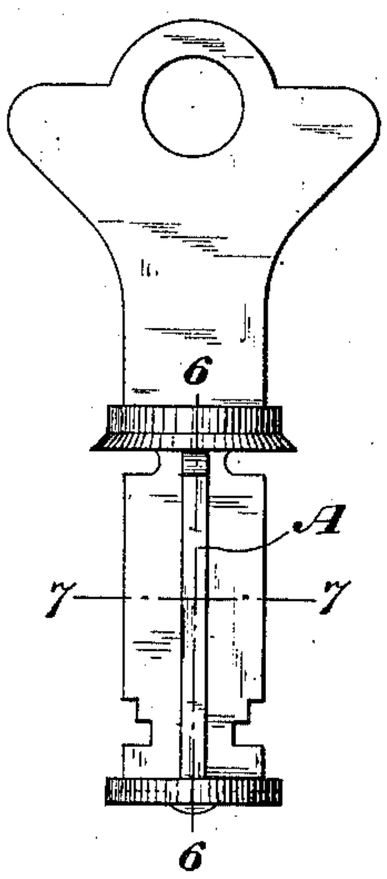


Fig 6.

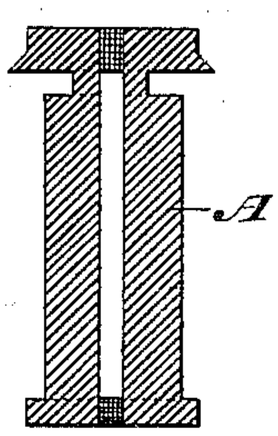
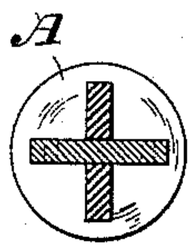


Fig 7



WITNESSES

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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. **212,636,** dated February 25, 1879; application filed October 7, 1878.

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Locks, of which the following is a specification:

My invention is in the nature of an improvement on my lock for which Letters Patent No. 172,899 were granted to me on February 1, 1876, and reissued on August 20, 1878, and numbered 8,379; and it consists in a novel method of supporting the key during its insertion and rotation.

As my lock has been heretofore constructed, the key, when being inserted, has been protected by the hollow longitudinal guide only from sidewise vibration. This longitudinal guide has served also to support the key during its rotation; but in order to prevent vibration as far as possible, I have sometimes provided a pintle on the end of the key, which rotates in a hole in the back plate of the lock. Now, if the key, when being inserted, should be tilted flatwise, as it may be, the end of the pintle will strike either against the tumblers or the back plate of the lock, and thus be prevented from reaching its proper place. In consequence of this latter fact I have not been able to make the pintle fit the hole very closely, as that would only increase the difficulty of insertion, so that even when the key was finally in place it could vibrate more or less, which, as every lock-expert knows, is objectionable, especially when a lock becomes worn by use.

The objects which I have attained by my present invention are to gain the fixed support for the key, which heretofore only a solid key-hub could give, and yet to retain the cheapness and convenience of my lock as heretofore made. These results I effect by using a key-hub with an outer end, which is fastened to and rotates within the nosing, while its inner or back end fits closely, and rotates within a bearing in the back plate of the lock. This outer end is preferably of slight thickness longitudinally, about like my rotating guide heretofore used; but it may be of any thickness, so long as it does not extend below the tumblers of the lock. The back end of the hub, necessarily as far forward as the top tumbler, and preferably up to within a short distance of its front, is of a diameter not greater than the distance between the deepest opposite bittings in the key.

A diametric longitudinal slot is made through that portion of the hub which is of less diameter than the other part, and a corresponding slot of the width of the key is then made in that part of the hub which fits the nosing.

Now, as will readily be seen, when this hub is in place it will serve, in connection with the hollow longitudinal guide heretofore used, as a rigid support for the key in every direction, both during its insertion and rotation, and that part of the hub opposite the tumblers being of the diameter specified above, the key-bits can project from the hub and operate the tumblers and the bolt precisely as in my lock already patented.

In the present instance the key is shown as having a pintle upon its inner end, which turns in the same bearing with the hub; but it might be cut off square and have its bearing against the back plate of the lock, the nosing preventing edgewise and the key-hub flatwise vibrations.

The stock for my hub may be struck up like ordinary flat-headed rivets, so that none will be lost in manufacture; or the hub may be turned down from solid stock, or made in any other well known way.

The key-slot in the hub may be made by sawing, punching, filing, drilling, or by any other well-known method.

As this invention has to do merely with the support of the key during its insertion and rotation, I need not describe the construction and operation of other parts of the lock, which are precisely as already described in my patent referred to above.

It is clear that I may place my tumblers on one or more sides of the hub, and that my key may be bitted alike or differently on its two edges, although for convenience I prefer to place my tumblers on two opposite sides of the hub and to bit the key alike on both edges. Nor is it absolutely necessary that the portion of the hub which is fastened to the nosing

should be its outer end; but the fastening may be at any point, or possibly at more than one point, so long as the portion opposite the tumblers is of the right diameter to allow the key to operate the tumblers and bolt, as may be seen by the drawings. The form of the hub at points which are not bearings for its rotation is not material.

In the drawings, Figure 1 is a vertical section through the center of a drawer-lock having my improvements applied, showing the hub as in the proper position for the insertion or withdrawal of the key.

A indicates the hub, whose outer end is spun into the nosing B, and there rotates. It may, however, be fastened in other ways. The other end of the hub rotates in a bearing, D, in the back plate of the lock. C is the slotted ledge, to prevent the withdrawal or insertion of the key except in the proper positions.

Fig. 2 is a section through the key-hub, showing how the key-bits project to operate the lock. Fig. 3 is an inner end view of my hub. Fig. 4 is a section through the hub on the line 4 4 of Fig. 3. Figs. 5, 6, and 7 show hubs according to my invention, modified merely in form.

What I claim, and desire to secure by Letters Patent, is—

1. A key-hub with one portion of a greater and another portion of a less diameter than the width of the key, and having a longitudinal slot throughout its length, which diametrically divides the smaller part of the hub, but is only the width of the key in the larger part, substantially as and for the purpose described.

2. The combination of a nosing, a key-hub with one portion of a greater and another portion of a less diameter than the width of the key, and having a longitudinal slot throughout its length, which diametrically divides the smaller part of the hub, but is only the width of the key in the larger part, and a key bitted on its edges, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WARREN H. TAYLOR.

In presence of—
E. D. OGDEN, Jr.,
SCHUYLER MERRITT.